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08/162,420 12/03/93 TOMPKINS

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EXAMINER
RAMIREZ, E

23M1/0310

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ART UNIT	PAPER NUMBER
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2314

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DATE MAILED: 03/10/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 12-03-93 ^{and 12-28-93} ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 03 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☐ Notice of References Cited by Examiner, PTO-892.
- ☒ Notice re Patent Drawing, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, Form PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

1. ☒ Claims 1-12 are pending in the application.

Of the above, claims — are withdrawn from consideration.

2. ☐ Claims — have been cancelled.

3. ☐ Claims — are allowed.

4. ☒ Claims 1-12 are rejected.

5. ☐ Claims — are objected to.

6. ☐ Claims — are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on —. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on — has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on —, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. —; filed on —

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

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EXAMINER'S ACTION

1. This is responsive to the continuation filed on 12/03/93.
2. Claims 1-12 are currently pending.
3. The Preliminary Amendment A, the preliminary Amendment AA, and the Declaration of Michael E. Tompkins have been received and fully considered by the Examiner.
4. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. §, first paragraph, as failing to adequately teach how to make and use the claimed invention.

To comply with the enablement clause of the first paragraph of 35 U.S.C. 112, the disclosure must adequately describe the claimed invention so that the artisan could practice it without undue experimentation. In re Scarbrough, 500 F.2d 560, 182 USPQ 298 (CCPA 1974); In re Brandstadter, 484 F.2d 1395, 179 USPQ 286 (CCPA 1973); In re Gay, 50 CCPA 725, 309 F.2d 769, 135 USPQ 311 (1962). If the examiner had a reasonable basis for questioning the sufficiency of the disclosure, the burden shifted to the Appellants to come forward with evidence to rebut this challenge. In re Doyle, 482 F.2d 985, 179 USPQ 237 (1973). The burden is placed initially upon the examiner to establish a reasonable basis for

questioning the adequacy of the disclosure. In re Strahilevitz, 668 F.2d 1229, 212 USPQ 561 (CCPA 1982); In re Angstadt, 537 F.2d 676, 185 USPQ 152 (CCPA 1975).

The specification is objected to under 35 USC 112 and Rule 71 as being vague, indefinite and containing insufficient disclosure to support the appended claims. The statute imposes upon applicant for letter patent the responsibility of providing a written description of the invention in such clear and exact terms as to enable one skilled in the art to make and use the invention.

In a block diagram disclosure of a complex claimed system which includes a microcomputer, a mere reference to a prior art, commercially available microcomputer, without any description of the precise operations to be performed by the microcomputer, fails to disclose how such a microcomputer would be properly programmed to either perform any required calculation - in the present arrangement the determination of PH levels, and the monitoring of temperature to determine when the heater should be engaged, diagnostic mode - or to coordinate the other system components in the proper time sequence to perform the functions disclosed and claimed. One of ordinary skill in the art would have to rely on undue experimentation to perform the claimed invention.

It is noted that Appellant's claimed invention is a control system for controlling a SPA by the use of a microcomputer or microcontroller; in another embodiment the claimed invention is a microcomputer for determining a malfunction condition and for

generating a signal which illuminates the display to show the malfunction; and, a microcomputer for activating and deactivating the heating elements. In essence Appellant's invention is an aptly programmed microcomputer which performs the function of controlling, diagnostic routines, and activating or deactivating.

The controlling a spa, performing diagnostic, and deactivating or activating are functions which are quite known to those in the art, but only manually. For example, the patent to Hancock discloses a control panel. Hancock's figures 4 and 9 shows that the control panel is electrical-mechanical. The patent to Ramseur et al. shows another electrical-mechanical SPA controller which compares the temperature of the heater (column 3, lines 4-7). The patent to Hatcher is a remote controller for controlling the temperature of the water in the spa. The patent to Raleigh et al. is a conventional electrical-mechanical system which in addition to regulating the temperature of the water includes a safety circuit. The patent to Castleberry et al. is a thermostat control of the heating element with a limit switch for preventing over heating. The patent to Krumhansl appears to suggest the use of a controller other than electrical-mechanical for controlling the temperature of the water in the spa (see columns 5 and 6). There is no suggestion in Krumhansl to substitute a microcomputer for a controller. The patent to Barrett, Sr. et al. is an electrical mechanical controller. The patent to Ramey which regulates the water temperature in a pool by the use of thermostats. Finally, the

patent to Whitaker et al. concerns the controlling of a heat exchanger for providing hot water to a spa.

Appellant's disclosure is deficient in that it fails to teach how those in the art can program the microcomputer to determine the PH level, monitor the temperature, control the operation of activating and deactivating at the required period, and the performing diagnostic routines.

Appellant states the following concerning the programming of the computer:

The Analog Conversion Program manipulates the converter circuitry to convert sensor input signals to digital information. This program also converts the digital information to engineering units for the purpose of display and comparison. The RTC control program controls all interaction with the Real Time Clock. The program is responsible for loading data for future events. The PID Control stands for proportional, integral and derivative. This program monitors the temperature of the water and determines when the heater should be engaged. The program issues a command which activates the heater and then monitors the temperature to determine when the heater should be turned off. The program is unique that it monitors the rate decrease and the rate of increase of water temperature so that the final temperature of the water is not higher or lower than the selected temperature. The spa control system can achieve an accuracy of plus or minus one degree fahrenheit with the heating and monitoring elements.

The output control program issues commands to the output components to turn on the TRIACS for control of the pump, heater, blower, lights and other components. The input scanning program monitors devices such as push buttons and switches. The flow switch would be monitored by this program, as well as any other shut down or feed back signals. The PH algorithm converts raw digital data received from the A-D converter on the PH channel and converts this data to standard PH units of measure. (Cited with emphasis pages 6-7).

Appellant's disclosure enumerates all the function performed by the program (see emphasized section above). Appellant has made

no reference to known programs to perform all the above tasks. Appellant has not provided a flowchart nor has Appellant detailed the operations that should be taken by the programmer. Appellant simply heralds the virtues of this computer program and expects those in the art to fill in the gaps. The latitude of the gaps are simply too great to enable one of ordinary skill in the art to make and use the invention given the rudimentary knowledge of computers, if at all, in the spa art.

The art of record reveals (a) the state of the prior art; and, (b) the relative skill in the prior art. As can be seen from the art of record there is support for performing temperature control in the spa art. The prior art does not, however, show a computer. The issue is not that a computer is not known in the art, but rather how one can program a computer to perform the above tasks. The art merely demonstrates a rudimentary knowledge of computers (see patent to Krumhansi).

The skill of those in the art appears to be mainly in the electrical-mechanical area of controlling a spa. The patent to Krumhansi indicate that knowledge of computers, microprocessors, or microcontrollers was nascent in 1986. The claimed invention represents an introduction to the computer age, and, as such, it is important for the application to increase the knowledge of those of ordinary skill in the art by supplying publication or patents which disclose these features or teach in detail these features (see In re Ghiron, 169 USPQ 723 (1971)).

Claims 1-12 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

5. The Declaration under 37 C.F.R. § 1.132 filed 12/3/93 is insufficient to overcome the rejection of claims 1-12 based upon 35 USC § 112 as set forth in the last Office action because the declaration does not demonstrate that the application disclosure would have taught a person of ordinary skill in the art how to make and use the claimed invention.

An affidavit or declaration under 37 CFR 1.132 which is in response to a 35 USC 112 objection must "demonstrate that the application disclosure would have taught a person of ordinary skill in the art how to make and use the claimed system." In re Brown, 177 USPQ 691, 695 (CCPA 1973). Further "it would [not] be either proper or permissible to accept affidavits [or declarations] in order to establish facts which the specification itself should recite in order to conform to the mandatory provisions of the pertinent statutes." In re Smyth, 90 USPQ 106,112 (CCPA 1951).

THE TOMPKIN'S DECLARATION

The declarant, Michael Tompkins, lays a foundation as to his qualification as an "electronic design engineer." The qualification of this declarant is not questioned. The declaration of Michael E. Tompkins, inventor, is under 37 CFR 1.132. Though the declaration is by one of the applicant "it is not to be disregarded for that reason alone and may be relied on when

sufficiently convincing." In re McKenna, 97 USPQ 348, 351 (CCPA 1953). The declaration of an Applicant should "be closely scrutinized and weighed with care, it being kept in mind that they [applicants] may unconsciously and unintentionally be colored as a result of enthusiasm for the subject matter of the application". 97 USPQ at 350.

The declarant is in agreement with Examiner that the "microcomputer was nascent in 1986 within the spa industry", and "[u]ntil that time all previous control systems were electromechanical and used relays for high power pump motor and heater switching." In clause 11 the declarant states the rationale for not specifying a "programming language" in the disclosure. The programming language is not the basis of the rejection, this clause is accepted as a valid exercise of discretion because those in the art can easily ascertain the enumerated languages. In the remaining clauses of the declaration the emphasis is on how those in the art can acquire the necessary understanding through all different methods of "education"; and, what devices were available, at the time, which perform analog to digital conversion, and measure pH and temperature. These different devices are all well known in the art and as such "[t]he specification need not disclose what is well known in the art." In re Buchner, 18 USPQ2d 1331, 1332 (CAFC 1991). The declaration fails because it does not supply "adequate information from which the examiner [] could base a finding of

whether the examiner's challenge was correct." In re Doyle , 179 USPQ 227, 232 (CCPA 1973). The assertion by the Examiner is that the invention " is an aptly programmed microcomputer", page 4 of the rejection, and that the disclosure is deficient because " it fails to teach how those in the art can program the microcomputer", page 5 of the rejection. The rejection is not concerned with the computer programs that could be used, and with the devices that are available. The rejection continues to be the failure of the disclosure to show how the microcomputer is programmed to perform the claimed functions.

Therefore, because the declarant does not demonstrate how those in the art, from the disclosure, could program the microcomputer to perform the claimed function the rejection under 35 USC § 112 is maintained.

THE DECLARATION OF F.L. DAVISON

The foundation of F.L. Davison as competent to give a declaration is not questioned. The purpose of the declaration is to augment the declaration of Messr. Tompkins. This declaration fails for the same reason because it does not challenge the Examiner's assertion.

6. This is a continuation of applicant's earlier application S.N. 07/054,581. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds or art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS**

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Art Unit 2314

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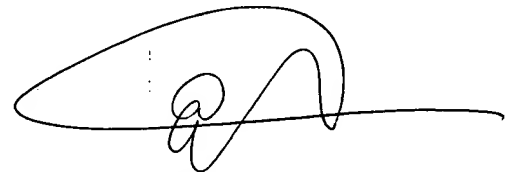
MADE FINAL even though it is a first action in this case. See M.P.E.P. § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner E.B. Ramirez whose telephone number is (703) 305-9786.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

ER/hh
March 8, 1994



**ELLIS B. RAMIREZ
PATENT EXAMINER
GROUP 2300**